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SECRETPART II - REPORT*AGUDZERA*(a) Institute at AGOZERI

1.

[redacted] small gas installation located outside the institute. It was equipped with a gasometer holding about 1,000 cubic metres. The gas used was obtained by means of heating crude oil. The complete installation was in full working order about August, 1946. It was used for supplying the laboratories and glass-blowing shops of the institute. [redacted]

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2.

ELEKTROSTAL in MOSCOW

[redacted] installation of a carbonyl generator which had already been built at SINOP and had been transferred to ELEKTROSTAL. The capacity of this generator was to be 2 kilogrammes of nickel powder per hour. [redacted] no attempt was made to install the generator as the institute lacked sufficient supplies of carbon dioxide and nitrogen, and, moreover, the Russian staff at ELEKTROSTAL were very reluctant about operating the carbonyl generator as they considered it dangerous. [redacted]

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and unsuitable for the purposes required. There were two generators installed at CHAPAYEVSK which, up to the time of their arrival, had been controlled by Russians. When they arrived, however, the Russians were sent back to MOSCOW. [redacted] Dr. ZIEHL experimented with the one remaining generator which was in good condition and succeeded eventually in slightly improving the quality of the nickel powder. The output of this generator was 2 - 4 kgs. of nickel powder per eight hours.

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(d) Details of Diaphragms at SINOP

1. In December, 1947, Professor THIESSEN was given the task of making 500 to 1,000 diaphragms which, on completion, were to be tested in 'Labor II' in MOSCOW. The fine wire mesh used for the purpose was first cut in sections, 50 cms. long and 15 cms. broad. They were then pickled in an electrolytic bath and hung on aluminium frames. With the aid of spray guns they were coated with fine nickel powder in suspension in pure alcohol. [redacted]

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[redacted] The sections of fine wire mesh were then dried in a drying press, pre-rolled and tempered

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3. In travelling by air between [redacted] and ELEKTROSTAL a small airstrip about 20 kms. north of AGOZERI was used and the plane always landed at the Central Airport at MOSCOW. [redacted]

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(b) Details of ELEKTROSTAL

1. [redacted] ELEKTROSTAL consisted of a number of sections (or Abteilungen) all of which were guarded by MVD and sealed off separately. All sections [redacted] were out of bounds to Germans. [redacted]

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The building, which was 15 x 15 metres and 10 - 12 metres high, was surrounded by an earth wall on three sides, about 4 - 5 metres in height and was not easily seen from the road. The party which arrived at ELEKTROSTAL [redacted]

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[redacted] was equipped with special passes, with photographs, available only for the section in which they were to work. So far as Informant could recall this particular section was equipped with two electric furnaces, one welding machine, two rolls and one scissors. The gauge room attached to the section was equipped with an analytical balance and three test benches where diaphragms were tested for porosity. The spraying room was fitted with two spray stands equipped with pistols. It also contained a vibrating sieve, a small shaking sieve and receiver. Informant recalled that another room was fitted with an auxiliary hydrogen generating plant. For details of the section see sketch at Annex "A" to this report.

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2. About the end of June, 1948, Dr. KREKER and Fraulein SCHILLING flew back to SINOP. [redacted]

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3. [redacted] in ELEKTROSTAL [redacted] fine wire mesh diaphragms similar to those evolved at SINOP being made. In the absence of a carbonyl generator nickel powder was collected by lorry from CHAPAYEVSK and delivered to ELEKTROSTAL.

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(c) Details of CHAPAYEVSK

1. [redacted] CHAPAYEVSK lay 50 - 60 kms. east of KUYBYSHEV. It was a medium-sized chemical or explosives plant. [redacted]

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2. [redacted] Professor KIKOIN told Professor THIESSEN that these fine wire mesh diaphragms were too pliable. It was established at this time that after test with an air pressure of 150 mms. the diaphragms collapsed as soon as the pressure was equalised.

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[redacted] On slow equalization of pressure the diaphragm retained its shape and porosity remained constant. When the equalization of pressure, however, was suddenly applied the diaphragm collapsed immediately.

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3. Parallel to THIESSEN's experiments with fine wire mesh diaphragms, Dr. REICHMANN at AGOZERI was engaged on research on ceramic diaphragms until his death about the summer of 1948.

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[redacted] the process involved placing a thick, muddy substance, beige in colour, in a press equipped with a 'plunger and jet'. The resultant diaphragms were hard and a little more than eggshell thickness. After extrusion they were glazed in a furnace.

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[redacted] the main problem attached to them was the difficulty of linking them up in cascades.

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[redacted] they were later sent for test to ELEKTROSTAL

[redacted] On the death of Dr. REICHMANN, Professor THIESSEN took over the work of ceramic diaphragm research at AGOZERI.

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(e) Activities of Dr. HARTMANN

[redacted] in 1947 Dr. HARTMANN was engaged during the whole of that year on designing a counter valve (Zaehlenrohr) for calculating degree of isotope separation, using UF₆. On completion of his task he expected to receive a premium of 25,000 roubles. However, the premium was actually awarded to a Russian, name unknown. Towards the end of 1947 Dr. HARTMANN travelled to MOSCOW where he was confronted with his counter valve and that developed by the Russian. On his return HARTMANN maintained that his was the better of the two.

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[redacted] all research projects at AGOZERI and SINOP were being worked upon by the Russians at the same time on parallel lines.

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PART III - INDEX OF PERSONALITIES

| | | |
|-----------|-----------|---------------------------------|
| Dr. | BUSSE | - Employed at SUKHUMI. |
| Prof. | HERTZ | - Employed at AGOZERI. AGUDZERA |
| Prof. | THIESSEN | - Employed at SINOP. |
| Dip.Chem. | ZIEHL | - Employed at SINOP. |
| Dr.Martin | KREKER | - Employed at SINOP. |
| PrI. | SCHILLING | - Secretary to Prof. THIESSEN. |
| Dr. | RIEHL | - Employed at ELEKTROSTAL. |
| Dr. | ORTMANN | - Employed at ELEKTROSTAL. |

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[REDACTED]

| | |
|--------------------|--|
| THIEME, fru | - Employed at ELEKTROSTAL. |
| BARONI, fru | - Employed at ELEKTROSTAL. |
| 'INASENFTWANA, fru | - Russian female chemist who accompanied Prof. THIESSEN to CHAPAYEVSK. |
| Prof. KIKOIN | - Visitor to SINOP. |
| Dr. HEICHMANN | - Employed at AGOZERI. AGUDZERA |
| Dr. HARTMANN | - Employed at SINOP. |

PART IV - ANNEXES

- Annex "A" - Layout sketch of Prof. THIESSEN's section at ELEKTROSTAL.
- Annex "B" - Layout sketch of the Generator Plant at CHAPAYEVSK.

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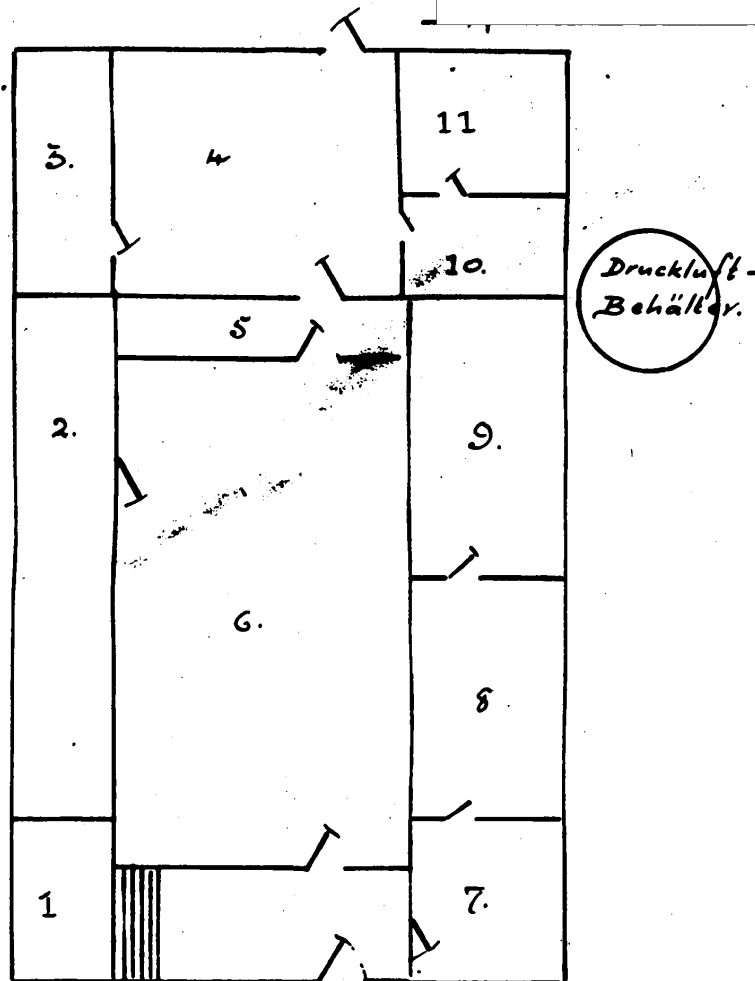
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Appendix 'A'



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Lay-out sketch of Prof. Thiessen's Section
at Elektrostal

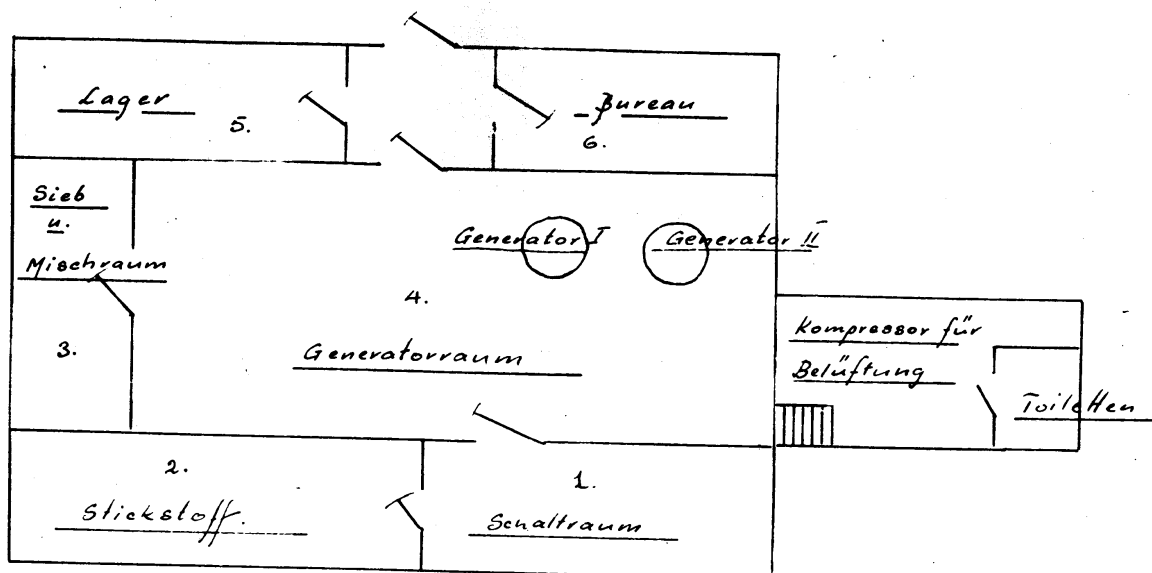
1. Toiletten M.
7. Toiletten F.
2. Meßraum [2 Meßtische für Diaphragmen-Durchlässigkeit]
3. Spritzraum [2 Spritzstände, 1 Vibrator, 1 Schüttelmashine]
4. Versammlungsraum
5. Trockenraum [2 Trockenschränke]
6. Halle [2 Elektroöfen, 1 Schweißisch, 2 Walzen]
8. Werkstatt
9. Kompressorenraum
10. Wasserstoffraum [H. Entwickler]
11. Lager (?)

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Appendix B

Lay-out Sketch of Generator plant
CHAPAYEBSK

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